



Impacts of using the EPCIS standard in two fish supply chains

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Outline

- eTrace Project
- Objectives
- Pilot studies
- Results
- Conclusions



Project Consortium



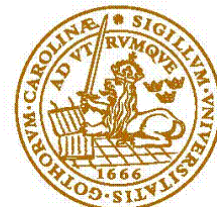
tracetracker®



FISKERIVERKET



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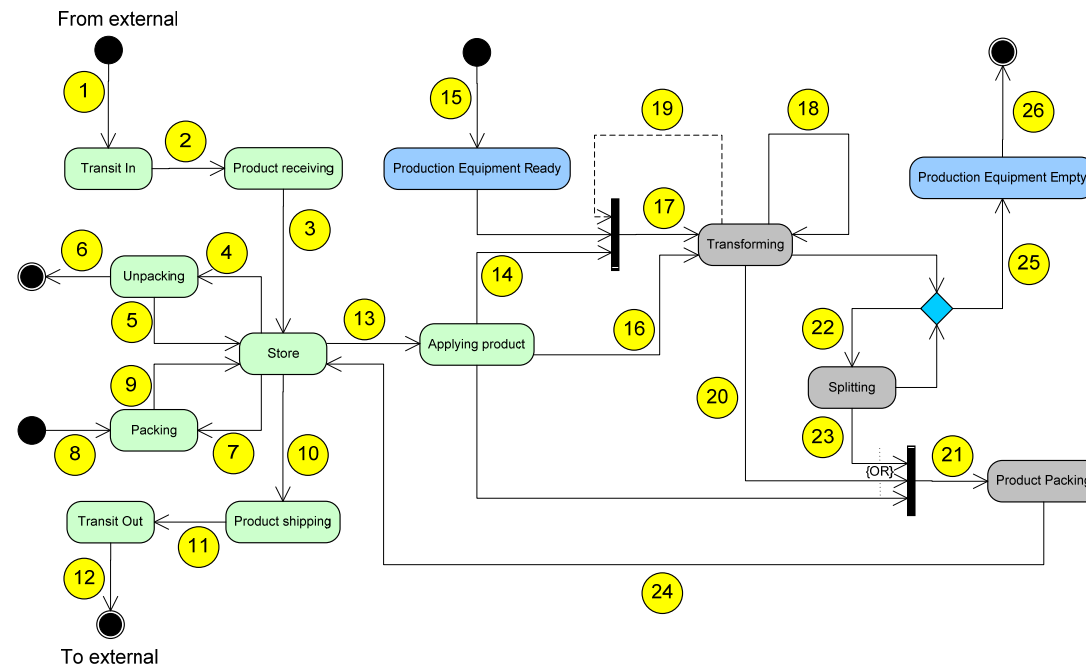
eTrace Project

- Partly funded by the SAFEFOODERA (www.safefoodera.net) through the Nordic Innovation Centre (www.nordicinnovation.net)
- **Objective:** To develop and evaluate an electronic traceability system based on the EPCIS standard by enabling automatic data capture related to tagged items



EPCIS and Traceability

- EPCIS is an EPCglobal standard designed to enable EPC-related data sharing within and across enterprises
- The approach used is based on identification of states and events in food production and mapping these events to the EPCIS standard



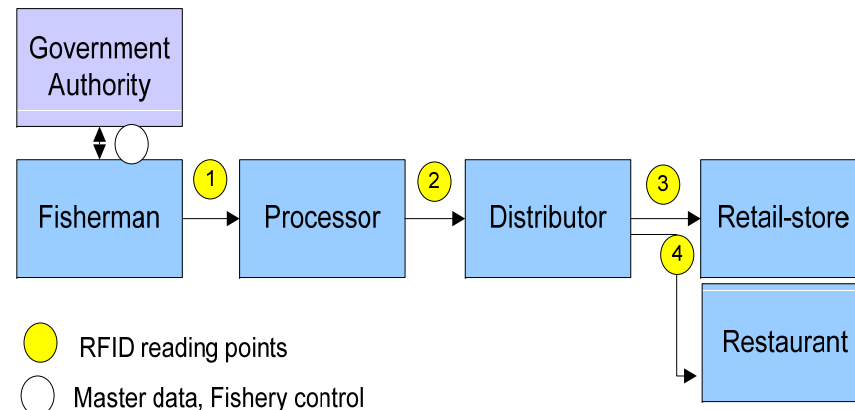
eTrace Pilot Studies

- Pilot studies were conducted to test the applicability of the traceability system designed based on the EPCIS standard
- Two pilot studies in fish supply chains:
 - Cod in Sweden
 - Red fish in Iceland

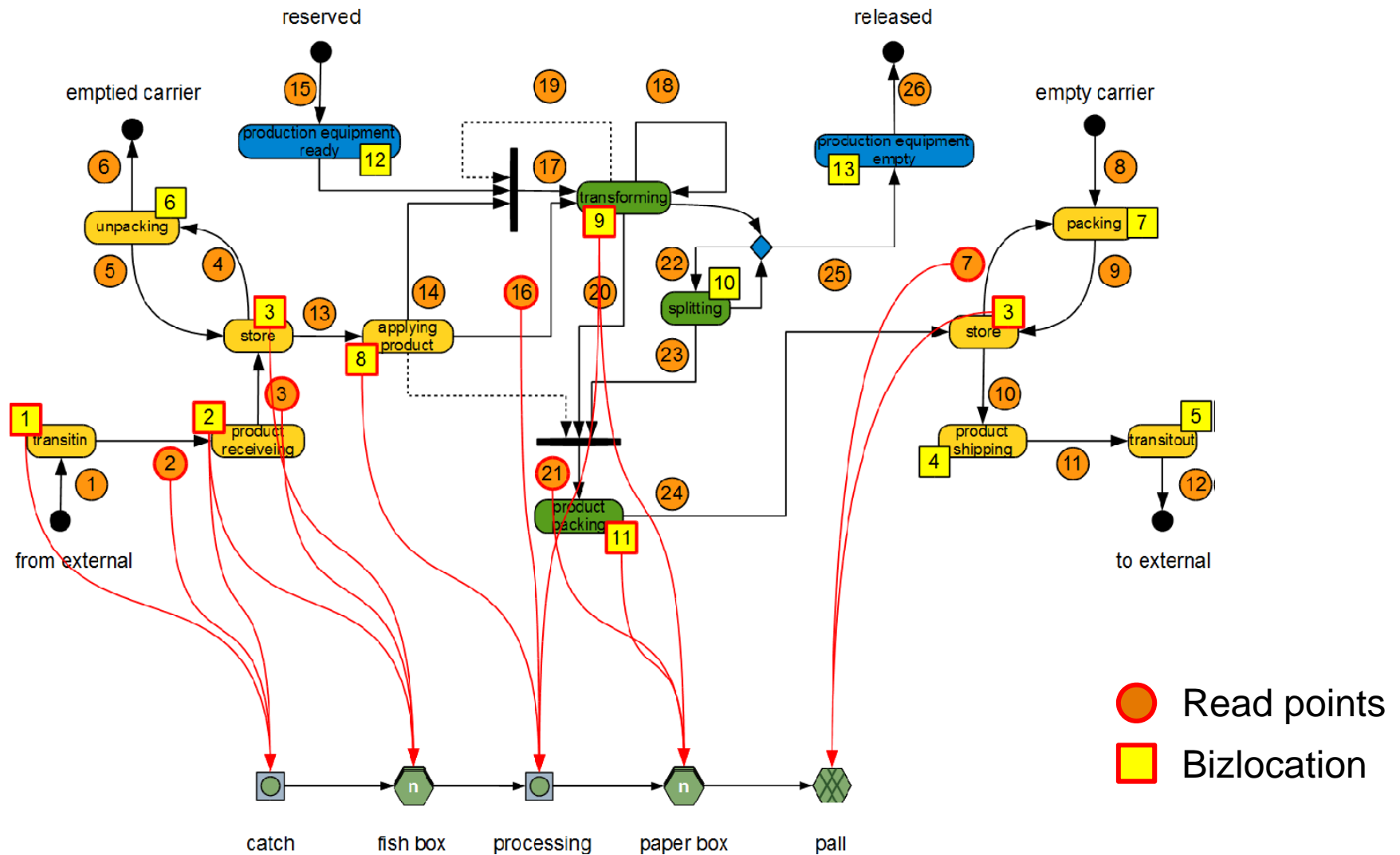


Swedish Pilot

- Pilot carried out in Simrishamn, Sweden from 17-21 May, 2010
- **Objective:** To track cod all the way through the supply chain
- **Method:** Catches labeled with RFID tags and read using handheld RFID readers as product moved through the supply chain

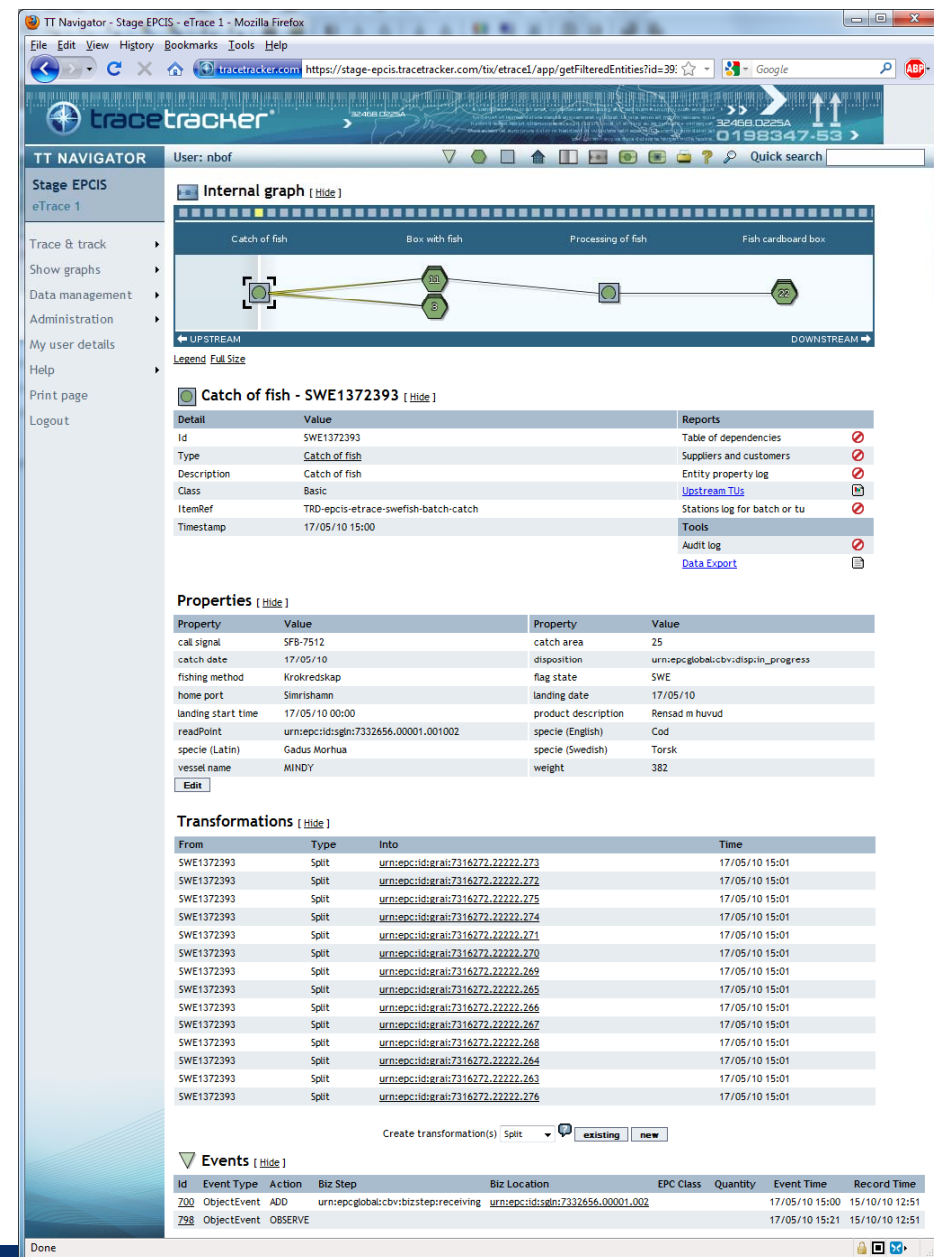
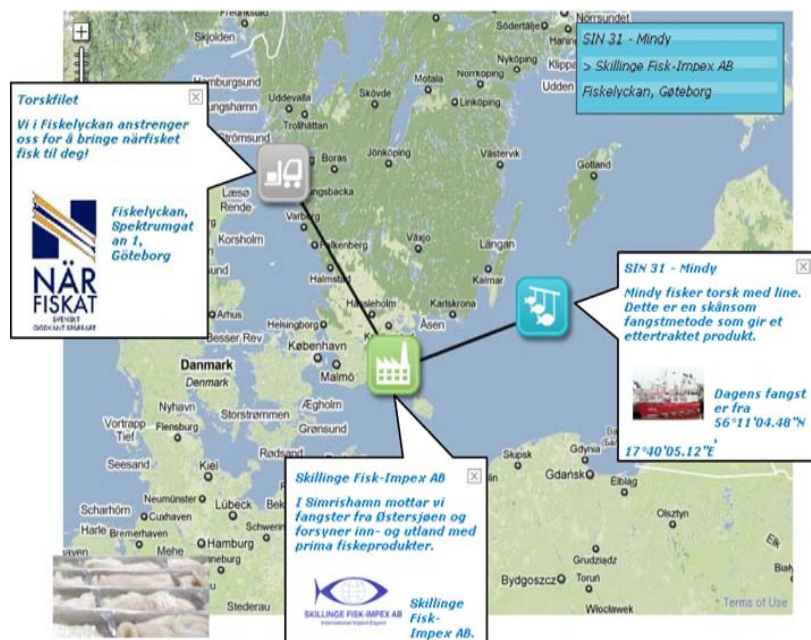


Swedish Pilot – Processor



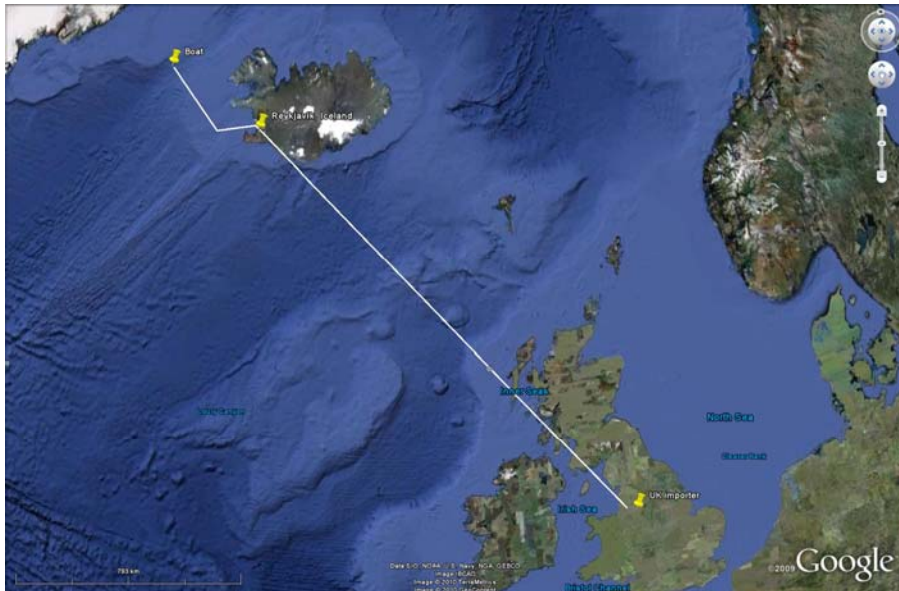
Swedish Pilot - Results

- Visibility
- Increased sales
- Information sharing

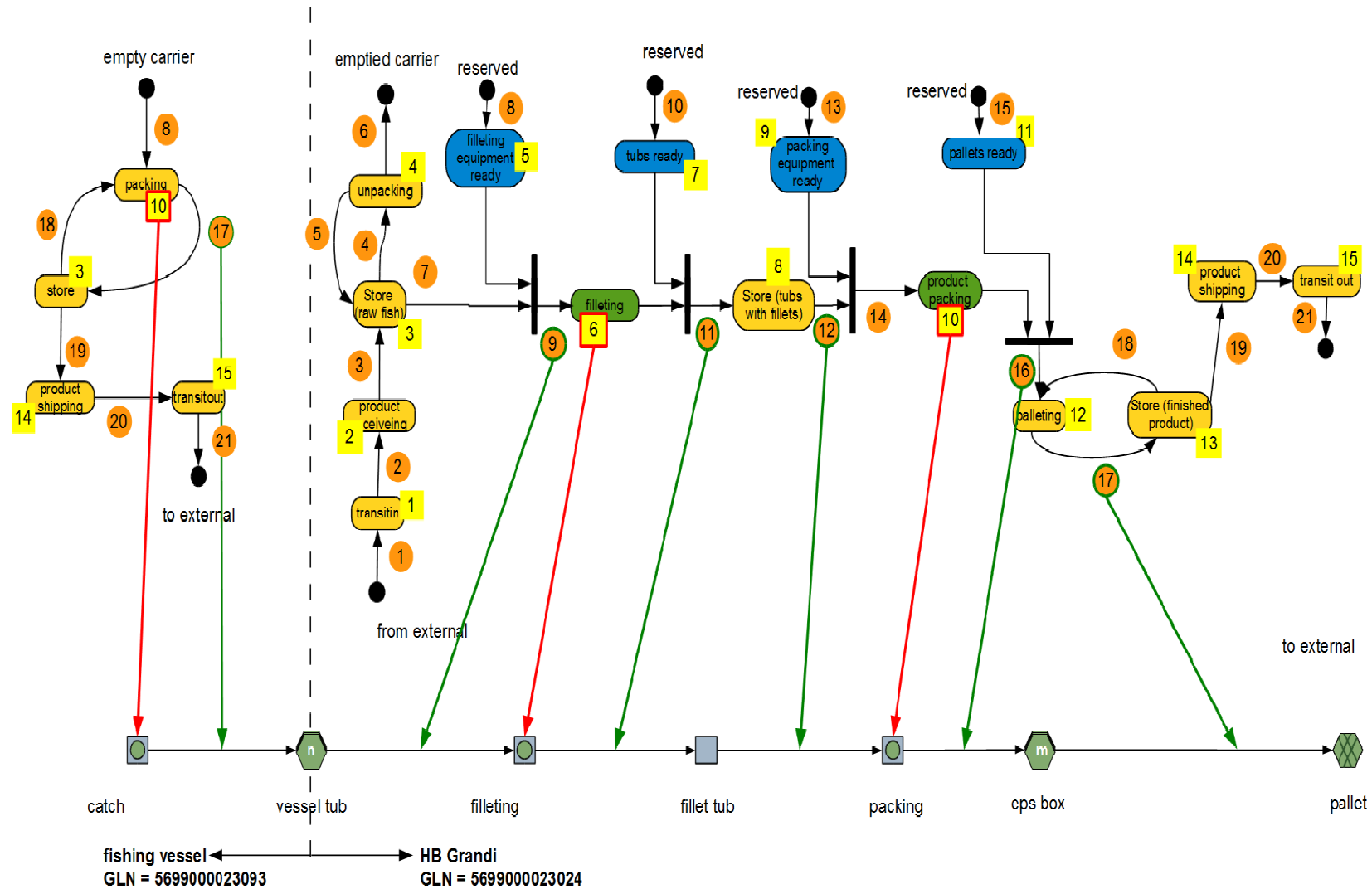


Icelandic Pilot

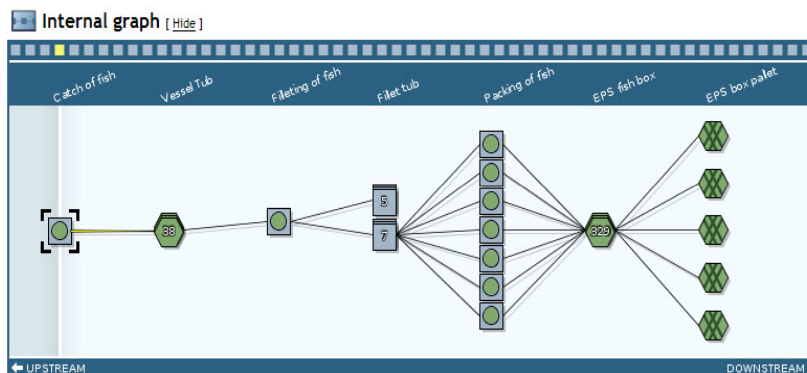
- Pilot carried out in Reykjavik, Iceland from 25-28 October, 2010
- **Objective:** To track red fish internally at the processor and to integrate food safety and quality information with the EPCIS framework



Icelandic Pilot



Icelandic Pilot Results



TT Navigator - Stage EPCIS - eTrace 2 - Windows Internet Explorer

https://stage-epcis.tracetracker.com/tix/etrace2/app/getTransformationTree?localc...

File Edit View Favorites Tools Help

Convert Select

Google restaurant

Søk Del Bokmerker Kontroller mairi...

Favorites Google Oversetter#ennow... Web Slice Gallery Google Oversetter#ennow...

Gmail - Priority In... Queen's Universit... Google Oversette... TT Navigator ...

Page Safety Tools

tracetracker

TT NAVIGATOR Bruker: etrace

Stage EPCIS eTrace 2

Trace & track

Vis grafer

Data håndtering

Administrasjon

Mine brukerdetaljer

Hjelp

Skriv ut side

Logg ut

Intern sporbarhetsgraf [Skjul]

UPSTREAM DOWNSTREAM

Symbol forklaring Full Størrelse

EPS box pallet - urn:epc:id:grai:5699000023.77.50 [Skjul]

Detalj	Verdi	Rapporter
Id	urn:epc:id:grai:5699000023.77.50	Tabell over avhengigheter
Type	EPS box pallet	Leverandører og Kunder
Beskrivelse	Pallet with fish in EPS boxes	Entitets egningsverdi logg
Trade Unit-klasse	Klynge	Oppstrøms TUS
MISSING:ItemRef	urn:epc:id:grai:5699000023.77.*	Stasjonslogg for batch eller tu
Tidspunkt	27.10.10 10:51	Verktøy
		Logg
		Data eksport

Egenskaper [Skjul]

Egenskap	Verdi	Egenskap	Verdi
Airway bill	290-3026-1630	disposition	urn:epcglobal:cbv:disp:sellable_not_accessible
Enter KEF cooling	27.10.10 16:01	Enter local storage	27.10.10 11:21
Leave local storage	27.10.10 15:01	Start KEF transport	27.10.10 15:01
Stop KEF transport	27.10.10 16:01		

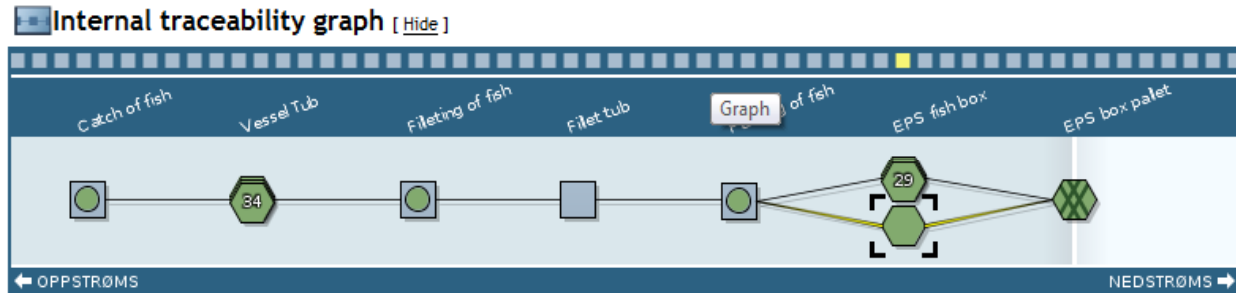
Rediger

Transformasjoner [Skjul]

Fra	Type	Til	Tidspunkt
urn:epc:id:sgtin:5699000023.333.185	Inn i klynge	urn:epc:id:grai:5699000023.77.50	27.10.10 11:05
urn:epc:id:sgtin:5699000023.333.186	Inn i klynge	urn:epc:id:grai:5699000023.77.50	27.10.10 11:05
urn:epc:id:sgtin:5699000023.333.187	Inn i klynge	urn:epc:id:grai:5699000023.77.50	27.10.10 11:05
urn:epc:id:sgtin:5699000023.333.188	Inn i klynge	urn:epc:id:grai:5699000023.77.50	27.10.10 11:05
urn:epc:id:sgtin:5699000023.333.189	Inn i klynge	urn:epc:id:grai:5699000023.77.50	27.10.10 11:05
urn:epc:id:sgtin:5699000023.333.206	Inn i klynge	urn:epc:id:grai:5699000023.77.50	27.10.10 11:05

Internet | Protected Mode: On

Icelandic Pilot Results



Icon Key [Full Size](#)

EPS fish box - urn: EPC: id: sgtin: 5699000023,333,203 [Hide]

Detail	Value	Reports
Id	urn: EPC: id: sgtin: 5699000023,333,203	Table of dependencies
Type	EPS fish box	Suppliers and Customers
Description	EPS fish box, ItemRef omitted two account for multiple GTIN series, I sizes of EPS boxes	Entity attribute value log
Trade Unit Class	Simple	Upstream RU
MISSING: ItemRef		Station Log for batch or tu
Created	27.10.10 10:59	Tools
		Logs
		Data export

Properties [Hide]

Property	Value	Property	Value
disposition	urn: EPCglobal: cbv: disp: sellable_not_accessible	Matarvefinn	link
type of unit	EPS 5kg box	Undesirable Substances	link

[Edit](#)

Transformations [Hide]

From	Type	To	Time
urn: gtinet: id: batch: etrace-icefish.packing.201010270900	Split	urn: EPC: id: sgtin: 5699000023,333,203	27.10.10 11:01
urn: EPC: id: sgtin: 5699000023,333,203	Into the cluster	urn: EPC: id: GRAI: 5699000023,77,50	27.10.10 11:05

Create transformation (s)

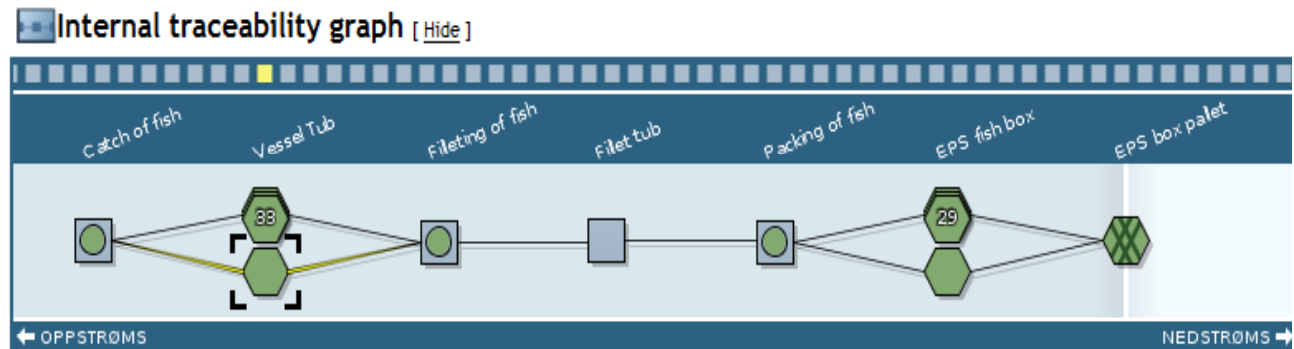
Split

[existing](#)

[new](#)

Events [Hide]

Icelandic Pilot Results



Icon Key Full Size

Vessel Tub - urn: EPC: id: GRAI: 5699000023.77.44 [Hide]

Detail	Value	Reports
Id	urn: EPC: id: GRAI: 5699000023.77.44	Table of dependencies
Type	<u>Vessel Tub</u>	Suppliers and Customers
Description	Tub with fish from fishing vessel	Entity attribute value log
Trade Unit Class	Simple	Upstream RU
MISSING: ItemRef	urn: EPC: id: GRAI: 5699000023.77.*	Station Log for batch or tu
Created	21.10.10 17:11	Tools
		Logs
		Data export

Properties [Hide]

Property	Value	Property	Value
Catch date	21.10.10	certificationscheme	link
disposition	urn: EPCglobal: cbv: disp: sellable_not_accessible	fishing method	Trawl
Ice weight	52	Landing date	24.10.10
product conditioning	qualified	product form	WHL
Species (English)	redfish	Temperature Control Method	ice
temperature record	21,68	type of unit	tub

Icelandic Pilot Results

Property History [Hide]

Id		Type	Description
urn: EPC: id: GRAI: 5699000023.77.44		Vessel Tub	Tub with fish from fishing vessel
Property		Value	Unit
temperature record		21,68	21.10.10 17:11

History [Graf]

From 26.10.10 To 27.10.10 (Default: Today)

82 Values found

Value	Unit	Time
3,65		26.10.10 10:20
3,15		26.10.10 10:30
3,15		26.10.10 10:40
3,15		26.10.10 10:50
3,15		26.10.10 11:00
3,15		26.10.10 11:10
3,65		26.10.10 11:20
3,65		26.10.10 11:30
3,15		26.10.10 11:40
3,15		26.10.10 11:50
3,15		26.10.10 12:00
3,15		26.10.10 12:10
3,15		26.10.10 12:20
2,64		26.10.10 12:30
3,15		26.10.10 12:40
3,65		26.10.10 12:50
3,15		26.10.10 13:00
3,65		26.10.10 13:10
3,15		26.10.10 13:20
3,15		26.10.10 13:30

Conclusions

- Ability to integrate food safety and quality information into the EPCIS system
- Improved internal traceability by modeling of transformation, split and merge events
- Better information visibility in supply chains
- Efficient information capture and exchange
- Future industry applications – use of RFID tags and installation of fixed read points

Questions?

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